

CLAIMS:

1. A conveyor system comprising a transfer assembly bridging a pair of side-by-side belt conveyors adapted to move articles in opposite directions, said transfer assembly comprising an air table including an air plate adapted to be mounted between said side-by-side belt conveyors at a first end portion thereof, said air table further including an inner guide and an outer guide defining a curved track in which the articles are constrained to pass while being transferred from one belt conveyor to the other, and wherein said curved track extends at opposed ends thereof over said side-by-side belt conveyors to cause a reorientation of the articles while the articles are still on the belt conveyors.
2. A conveyor system as defined in claim 1, wherein said first end portion of said side-by-side conveyors has a terminal end, and wherein said inner and outer guides are spaced longitudinally inwardly from said terminal end.
3. A conveyor system as defined in claim 1, wherein first and second arrays of air jet holes are defined in said air plate, the air jet holes of said first and second arrays being respectively distributed along first and second concentric arc of circles generally following a path traced by said curved track.
4. A conveyor system as defined in claim 3, wherein said air jet holes are inclined in a direction of travel of the articles.
5. A conveyor system as defined in claim 4, wherein said air jet holes form an angle of about 30 degrees with a top surface of the air table.
6. A conveyor system as defined in claim 1, wherein said inner guide is provided in the form of a plate secured on top of the air table, the plate having a rounded end for guiding the articles at an inner radius of the curved track.

7. A conveyor system as defined in claim 1, wherein said outer guide includes a plate secured on top of the air plate and having a curved inner surface for guiding the articles at an outer radius of the curved track.

8. A conveyor system as defined in claim 1, further comprising a plurality of pucks displaced by said belt conveyors and adapted to carry the articles to be processed, said pucks being sized to ride in said curved track.

9. A conveyor system comprising an air table bridging a pair of side-by-side belt conveyors adapted to move articles in opposite directions, said air table comprising an inner guide and an outer guide bounding an upwardly facing channel extending along a curve between said side-by-side belt conveyors, wherein said channel extends at opposed ends thereof partly over said belt conveyors in order to initiate a reorientation of the articles on the belt conveyors as the articles are being transferred from one conveyor to the other via the air table.

10. A conveyor system as defined in claim 9, wherein said air table comprises an air plate mounted in a free space between the belt conveyors, and wherein said outer guide is secured to said air plate and extends at opposite ends thereof over said side-by-side belt conveyors.

11. A conveyor system as defined in claim 10, wherein first and second arrays of air jet holes are defined in said air plate, the air jet holes of said first and second arrays being respectively distributed along first and second concentric arc of circles.

12. A conveyor system as defined in claim 11, wherein said air jet holes are inclined in a direction of travel of the articles, and wherein said air jet holes form an angle of about 30 degrees with a top surface of the air table.

13. A conveyor system as defined in claim 9, wherein said inner guide is provided in the form of a plate secured on top of the air table, the plate having a

curved end defining a guiding surface for the articles as the articles travel on the air table.

14. A conveyor system as defined in claim 9, wherein said outer guide includes a plate secured on top of the air table and having a curved inner surface for guiding the articles at an outer radius of the channel.

15. A conveyor system as defined in claim 9, further comprising a plurality of pucks displaced by said belt conveyors and adapted to carry the articles to be processed, said pucks being sized to ride in said channel.

16. A loop conveyor comprising first and second side-by-side conveyor runs extending in parallel to each other, the first and second conveyor runs being driven to convey articles in opposite directions, first and second transfer assemblies provided at opposed ends of said first and second conveyor runs to transfer the articles from one conveyor run to the other, said first and second transfer assemblies defining with said first and second conveyor runs a loop circuit, each of said first and second transfer assemblies having a track defining a 180° bent, said track having a bottom surface and a pair of curved inner and outer guide walls extending from said bottom surface to form therewith an upward facing channel for guiding the articles along said 180° bent, wherein said bottom surface is perforated for providing for the formation of an air cushion underneath of the articles as the articles travel along said tracks.

17. A loop conveyor as defined in claim 16, wherein said first and second conveyor runs are belt conveyors.

18. A loop conveyor as defined in claim 16, wherein each of said first and second transfer assemblies comprises an air plate mounted in a free space between the conveyor runs, and wherein said outer guide walls forms part of an outer guide mounted to said air plate and extending at opposite ends thereof over said conveyor runs.

19. A loop conveyor as defined in claim 16, wherein first and second arrays of air jet holes are defined in said bottom surface, the air jet holes of said first and second arrays being respectively distributed along first and second concentric arc of circles.